Community Collaborative Rain, Hail & Snow Network

Southern New England

May 2021

April was a true CoCoRaHS month: Rain, Hail and Snow measured and reported in our 3 states, even by 5 of our observers in a 24-hour period.

This month's anniversary feature is for Massachusetts. Joe's feature article is about our April storms.

Another record month of reporting with our 3 states, climbing to new reporting heights.

Starting off with our observers, recently crossing over multiples of 1000 Daily Reports. We begin with our version of The "Grand" List.

Let's get into it.

The "Grand" List

Congratulations to all of these observers from our three states who have recently passed a milestone of 1000 Daily Reports.

4000 Daily Reports

MA-MD-7	Winchester 0.7 SE

3000 Daily Reports

MA-BA-27	Wellfleet 0.7 NW

2000 Daily Reports

MA-ES-20	Haverhill 0.7 N
MA-BA-47	Mashpee 2.4 WSW

1000 Daily Reports

RI-WS-25	Rockville 0.4 E
CT-FR-57	Trumbull 0.9 W
CT-HR-55	Southington 1.7 WNW

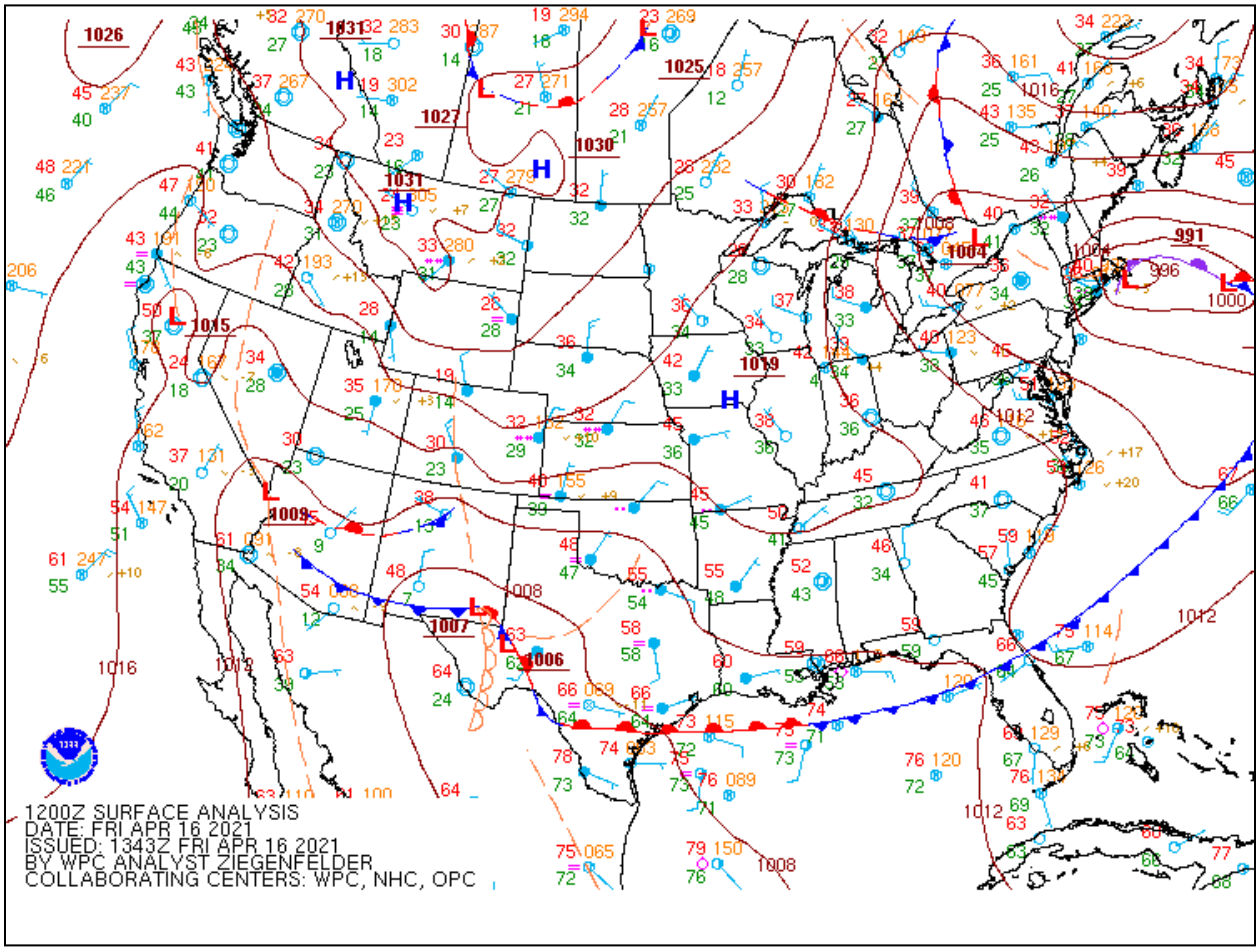
April Storms

Joe DelliCarpini – Science & Operations Officer, NWS Boston/Norton MA

April featured a wide variety of weather, from an interior winter storm On April 16 to severe weather less than one week later on April 21. This is certainly not unheard of here in New England since the transition from winter to spring usually brings an active weather pattern.

Snow in Staffordville, CT on April 16, 2021 (Jeff Aborn, CT-TL-2)

The weather map on the morning of April 16 (below) showed a low pressure system centered near Nantucket. It was able to draw in plenty of moisture from the Atlantic and it was just cold enough to result in snow across much of southern New England away from the coast, especially in the hills, where totals of 6 to 10 inches were common.. By the time the snow ended, some places picked up over a foot of snow. Some of the higher totals reported by our CoCoRaHS observers included 15.3” in Warwick, MA (Franklin County), 11.9” in Union, CT (Tolland County), and 10.0” in Winchendon, MA (Worcester County).

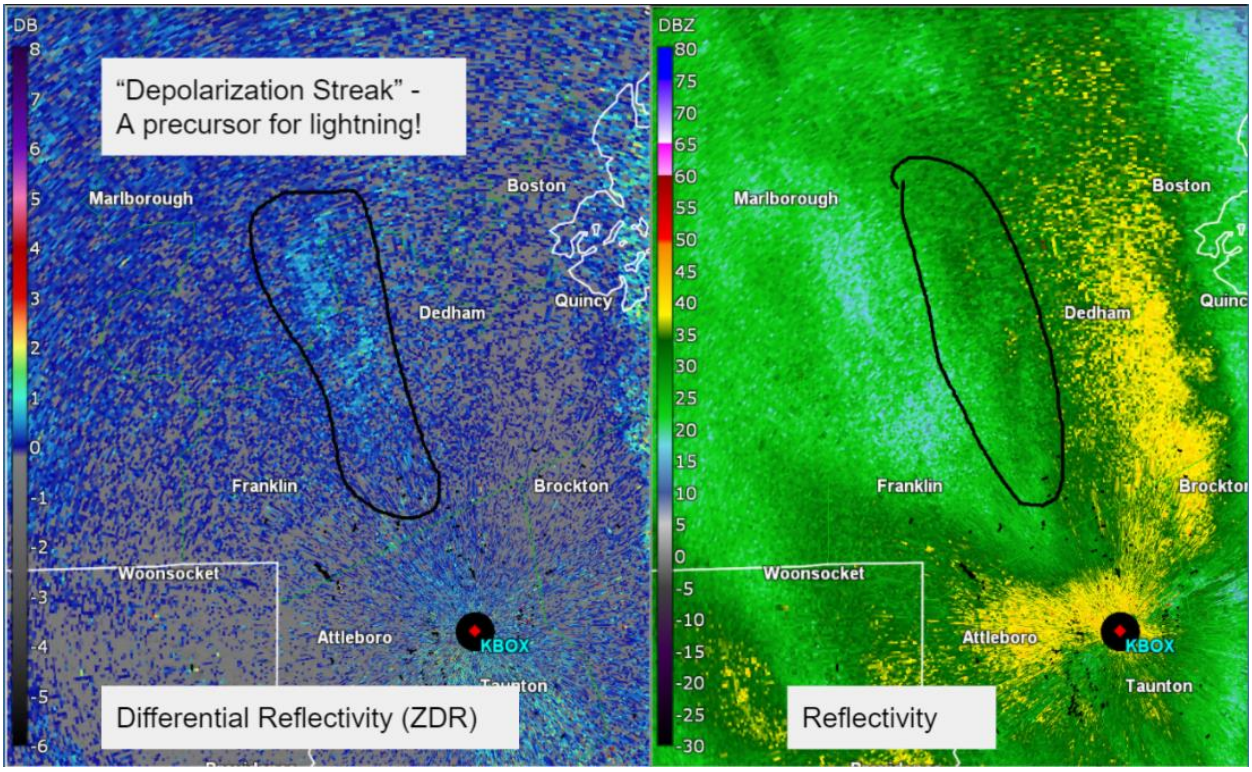


Weather Map at 8 AM EDT on April 16, 2021

One interesting aspect of this storm was the number of reports of thundersnow that were received in the suburbs west of Boston Friday morning. Thunder during winter storms is less common than during the summertime but forms in a similar process: unstable air rises and the motion of positively and negatively charged particles (in this case snow and ice) results in the buildup of an electrical charge.

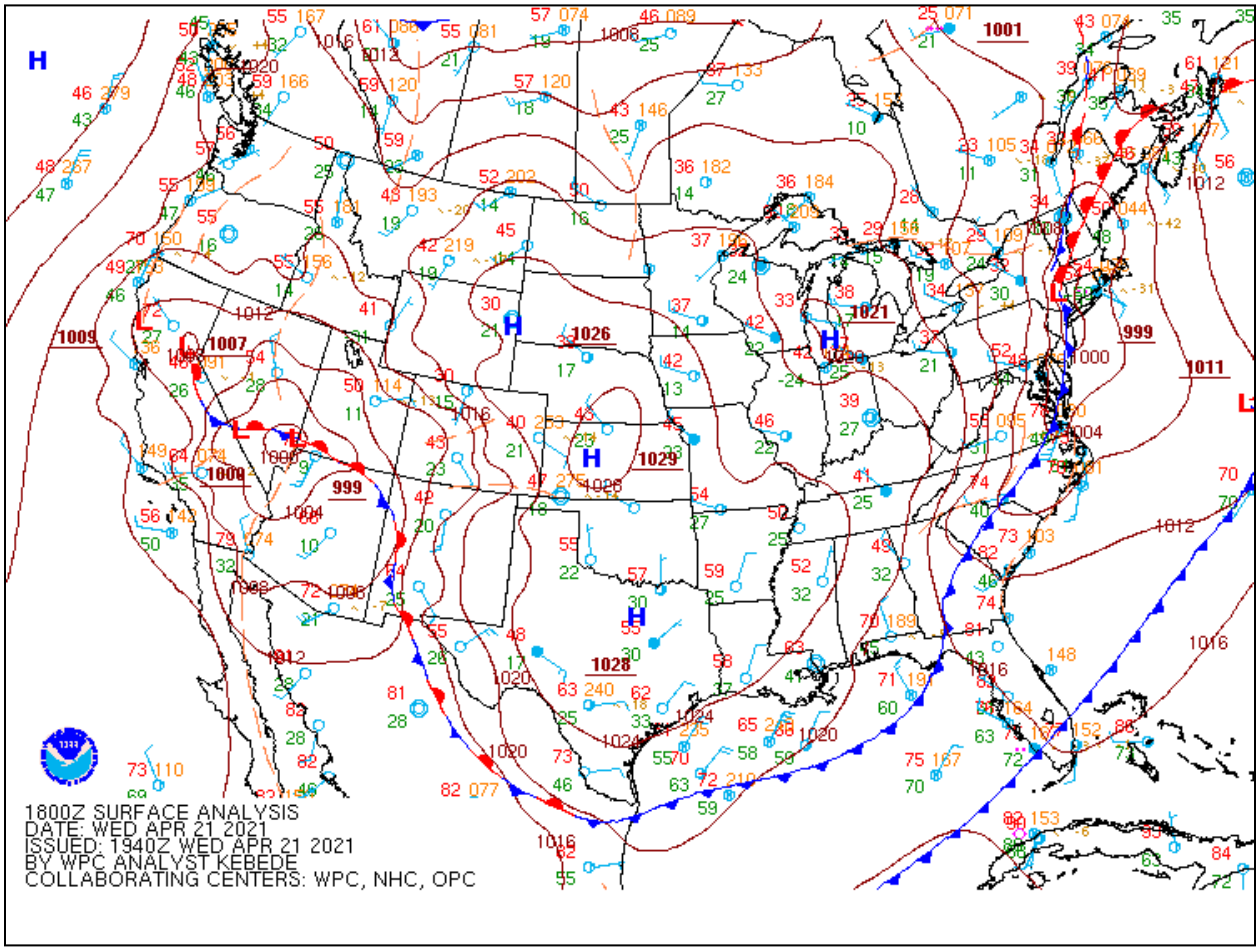
We can actually see this occurring on Doppler radar, but you have to look closely! The radar image below shows differential reflectivity on the left and reflectivity on the right. Differential reflectivity is the difference between the horizontal and vertical pulses from the radar which tell us the shape of raindrops, snowflakes, hail, etc. Reflectivity is the return from the target and

is what most of us are used to seeing from radar (where it is raining or snowing). When the snowflakes or ice particles become aligned in an electric field (prior to lightning formation), they form what is known as a "depolarization streak" which is a line of lower returns in differential reflectivity (circled in both images). These can be difficult to pick out quickly but often form a few minutes before the first lightning strike.



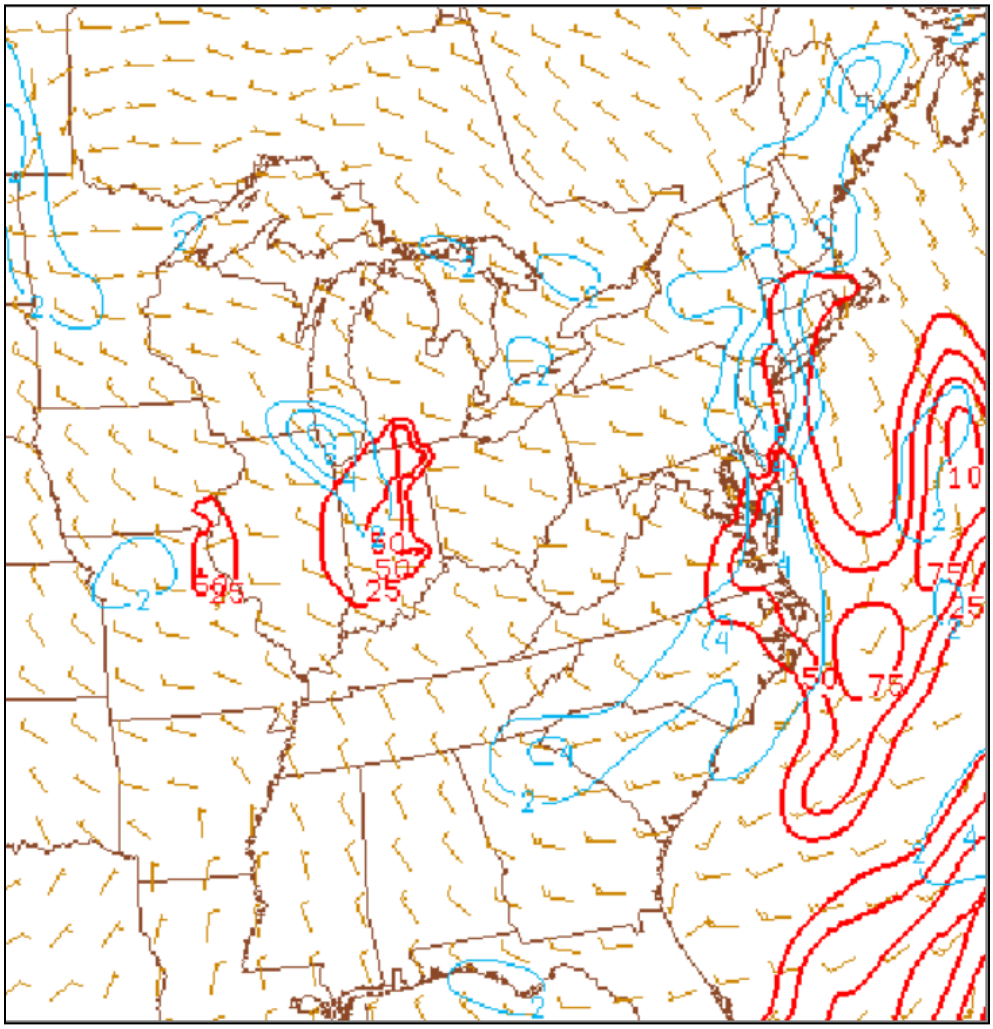
Radar images from the Taunton, MA Doppler Radar showing a depolarization streak

Less than one week later, severe thunderstorms produced wind damage and even two tornadoes in southern New England. The weather map showed a fairly classic setup for severe weather in our region: a warm front had lifted north of the area providing warm and humid weather for April, and an approaching cold front and low pressure system would generate the lift to produce showers and thunderstorms.

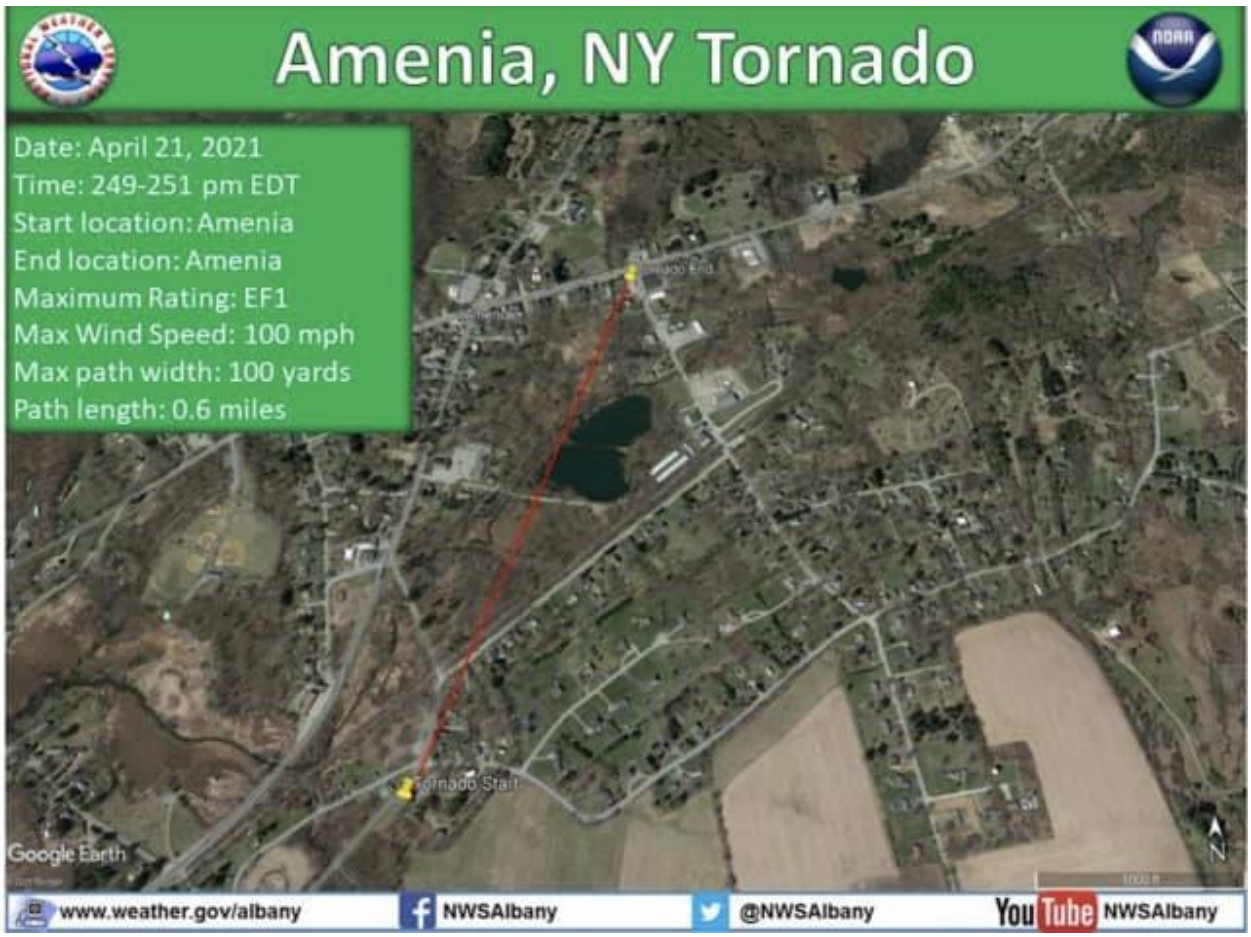


Weather Map at 2 PM on April 21, 2021

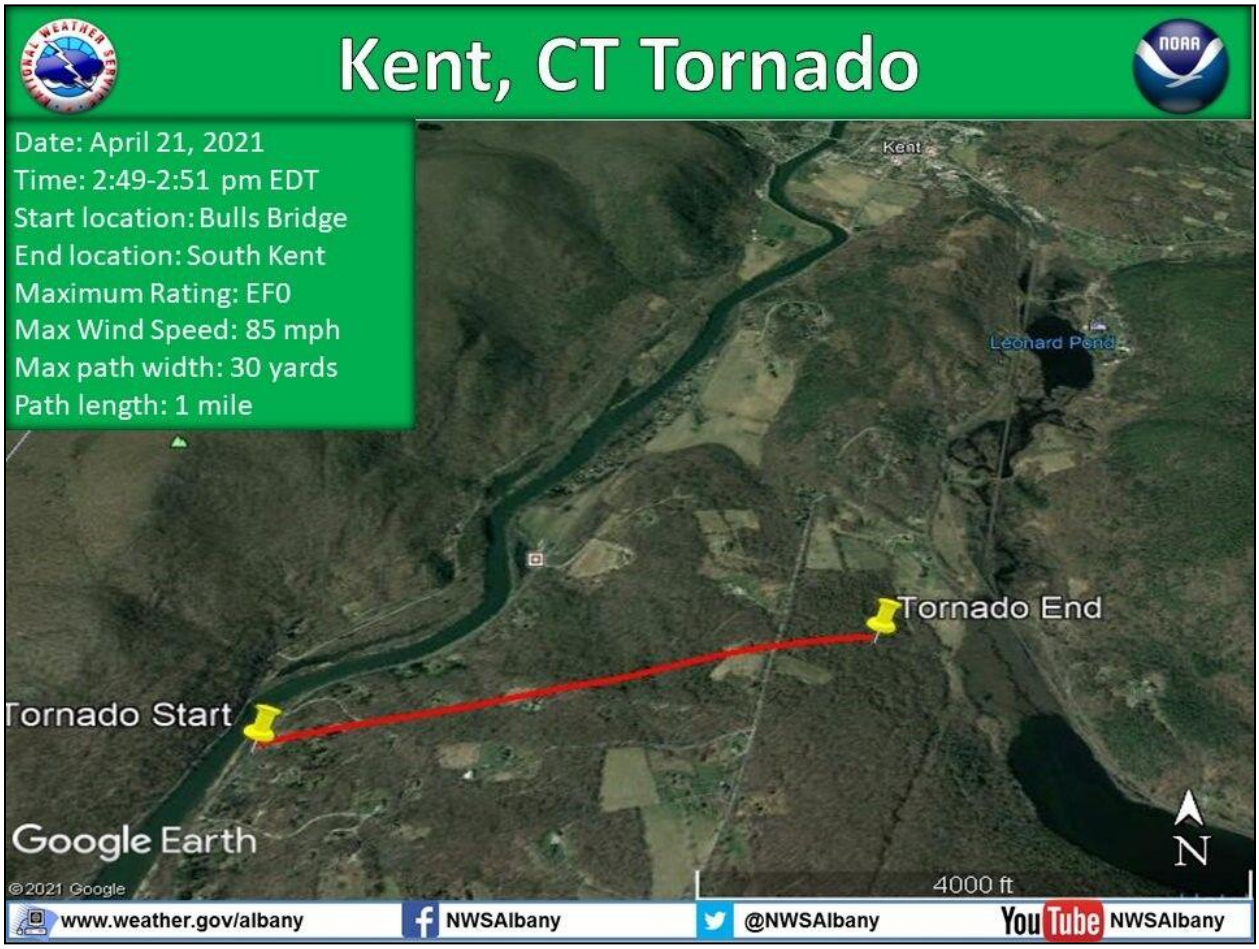
During severe weather events in spring and early fall, we often look at instability (energy) and wind shear (change of wind direction with height) in the lowest levels of the atmosphere as indicators for whether severe weather will occur. Where these two factors overlap is often where severe weather is favorable. On April 21, note that areas from the Hudson Valley into western portions of Connecticut and Massachusetts were in the overlap area, and that is indeed where most of the severe weather reports came from. In addition to wind damage, two tornadoes were confirmed: one in Amenia, NY (EF-1 with wind speeds up to 100 MPH) and another in Kent, CT (EF-0 with winds up to 85 MPH). The Kent tornado was the earliest tornado in the year on record in Connecticut; the previous being in Tolland County on April 26, 1961.



Instability (red) and wind shear (blue) at 3 PM on April 21, 2021



Graphic showing the track of the Amenia, NY EF-1 tornado (NWS Albany)



Graphic showing the track of the EF-0 Kent, CT tornado (NWS Albany)

News Items

Rain, Hail & Snow… in 1 day!: On April 21st-22nd , 5 of our area stations did something extremely rare in our network. They measured and reported rain, hail and snow in a 24-hour period.

Those stations are

MA-BE-20 Lee 3.7 SE

MA-FR-17 Buckland 1.8 ESE

MA-HS-7 Plainfield 2.2 SW

CT-HR-8 North Granby 1.3 ENE

CT-TL-33 Tolland 3.6 NNE

Congratulations to these observers. Always remember that for one day, that you did it all in CoCoRaHS: Rain, Hail & Snow.

Standout items: The growth continues for our area, and in the network as a whole. A few standout items to mention.

- Recent Hail & Significant Weather Reports are noted and appreciated.
- Look at the map of Condition Monitoring Reports and see the concentration over our 3 states. Keep it up and more can join in. In Rhode Island and elsewhere, we need more Consistent Stations
- Snow fall, Snow depth and Total SWE reporting from this group continues to stand out across the entire network. You are the Rulers of the Snow all year round.

Thank you for your reporting efforts and participation in our network.

Observer Tips

Comments: The season of heavy rain and downpours is coming upon us. Reports come in, some of them for eye-popping amounts, high and low. The natural tendency is the look at the report and find more details.

This is where your Comments, Observation Notes, increase in value. What you have to say, your eyes and ears and experiences, play a part in verifying and clarifying your reported amount. Examples such as:

"It's legit. Most rain I have ever received. 3.76""

"It looked like it was going to rain during the day but did not. Rain fell overnight. 0.29"

"Clear skies throughout the day and night. Dew on the gauge."

"Rainy days and Mondays always get me down. 0.18" Rain at obs time"

"No decimal point error here. Light rain in the afternoon. 0.10"

"A few drops of rain in the afternoon. Light trace."

Typing may not be everyone's forte. Short, simple, to the point and repeat your reported amount, ***adds value*** and ***clarity*** to verify your reported amount.

Finding dry or wet conditions? Dust or mud instead of green grass? Birds and flowers arriving on cue? Save those Comments for a weekly Condition Monitor Report.

Adding your experiences to days with precip, days without precip, all days, and you create a small narrative that you can read by looking back at your Comments through the website, or when your Water Year Summary is published in October-November.

What to do about dew: If you are new the crew, be sure you know what to do about dew. Clear skies overnight often yield dew on the gauge and a little bit in the inner cylinder. How often? If you keep track of "dew" with your Comments, you might find ***half*** of the days in these warm weather months, have dew in the mornings. **HALF**.

Dew is condensation, not precipitation. During your morning observation, if you find dew on the funnel, and a little bit in the inner cylinder, please **AVOID** the temptation to report it as precipitation, 0.01" or T.

LOOK for confirming cues of precipitation, such as wet pavement or puddles. Another clue is the size of the droplets on the funnel. Large droplets on the funnel are likely from precipitation. Small droplets on the funnel are likely from condensation.

When in doubt or in certainty, a comment with your report goes a long way.

Significant Weather Reports: The season of downpours is upon us. You have an opportunity to assist in verifying radar estimates in real-time, and issuing Flood Warnings. This real-time report only takes a minute to alarm at a forecaster's workstation.

- **1" or more of rain in 1 hour or less.**
- **2" or more of rain. Even when you measure 2" or more with your morning observation.**
- **Flooding.**
- **Anything you feel is significant**!

mPING app for Apple and Android: Show the rest of us where the localized rain showers are. Use mPING to rain and reduced visibility and I hope nothing more serious than that.

Happy Anniversary, Massachusetts!

March 1, 2009. Massachusetts is admitted to CoCoRaHS, the 40th state to join the network.

Massachusetts CoCoRaHS

Comments by Joe DelliCarpini – Science & Operations Officer, NWS Norton MA and State Coordinator for Massachusetts

PROMOTIONAL PHOTO FOR MASSACHUSETTS COCORAHS (HENRY REGES)

After Rhode Island was established as the first state in New England to join CoCoRaHS in April 2008, Henry Reges set his sights on Massachusetts to join the growing network. As a frequent visitor to Plymouth to see family and friends, he provided us with a special photo which we still use today (left). It's not every day you see a 4-inch rain gauge next to a historical landmark!

GAUGE PICTURE OF AMS HQ ON BEACON STREET IN BOSTON, MA-SF-1

Henry worked with our office to set up a meeting at the American Meteorological Society's (AMS) Headquarters in Boston. We also invited representatives from Massachusetts DCR (Department of Conservation and Recreation) to join us since they were a key partner of ours for drought and water resource management in the state. Henry felt it would be appropriate for the AMS Headquarters to be the first CoCoRaHS station in the Commonwealth and to this day you can see their reports listed under

MA-SF-1. We began an aggressive recruiting campaign that included newspapers, TV meteorologists, and NWS Skywarn training sessions.

Prior to the March 1, 2009 startup we had 16 observers ready to go. Eight of them are reporting 11 years later including:

MA-BA-1 Yarmouth MA-BA-2 Falmouth

MA-BA-3 Falmouth MA-BR-2 Rehoboth

MA-BR-3 Norton MA-NF-1 Norwood

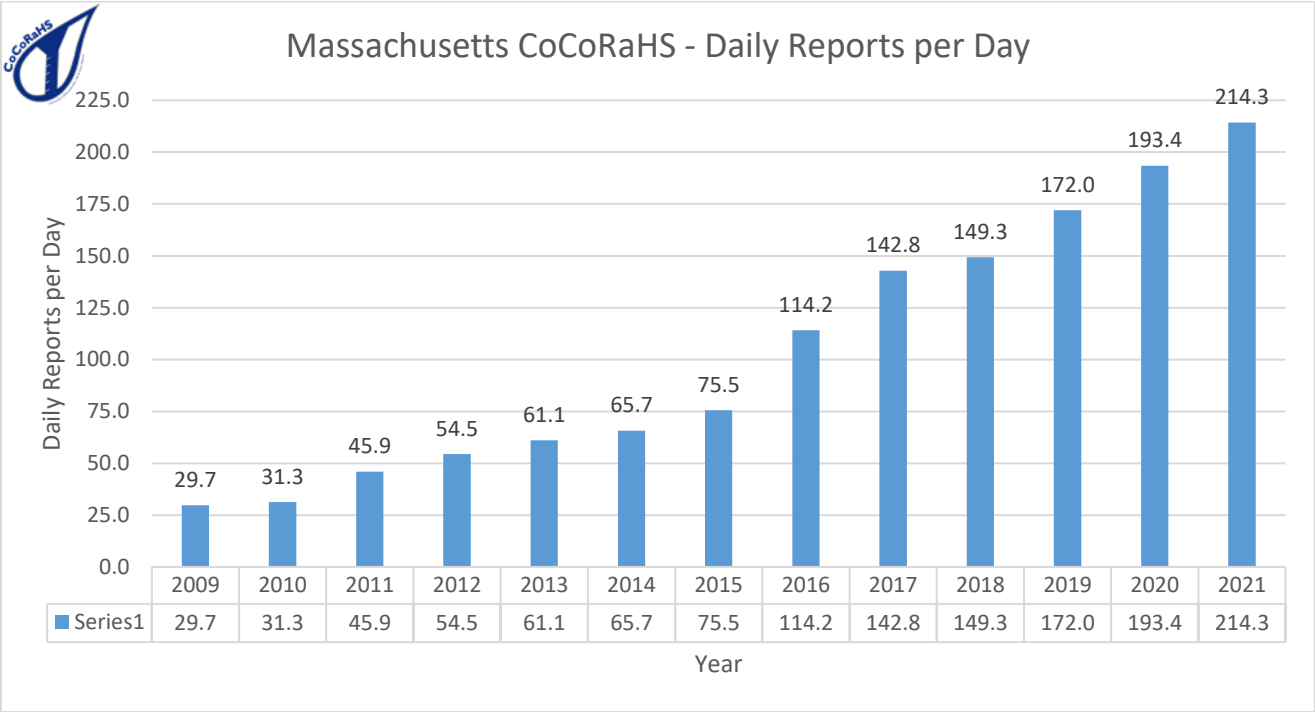
MA-SF-1 Boston MA-WR-1 Milford

Today, we have grown more than 289 actively reporting observers in the Bay State. Your observations have been critical over the years to help define the climate of Massachusetts. Being able to examine trends in rainfall and snowfall patterns, monitor drought conditions, assess the potential for river and stream flooding, and map storm totals are all made more accurate by your daily observations!

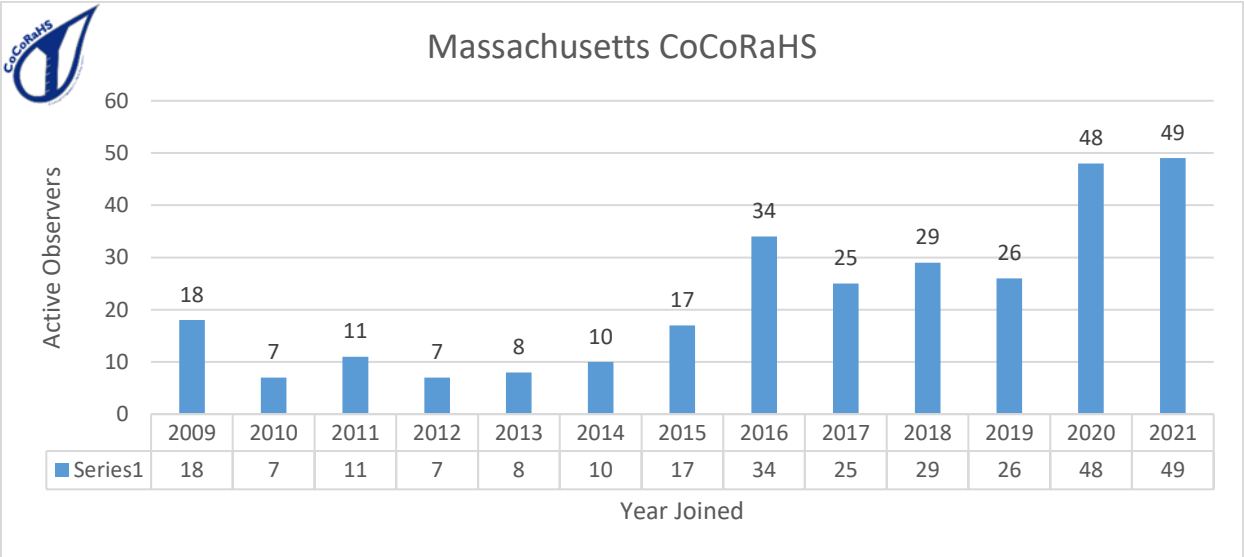
Don't forget to follow us on Twitter (@MA_CoCoRaHS) where we periodically highlight your observations (follow @CT_CoCoRaHS for Connecticut and @RI_CoCoRaHS for Rhode Island). There are also State Pages on the CoCoRaHS web site which features the latest newsletter and other useful information.

Congratulations to all in Massachusetts!

All of the other states have had their ups and downs with reporting year over year, except two. South Carolina is one. Massachusetts is the other.

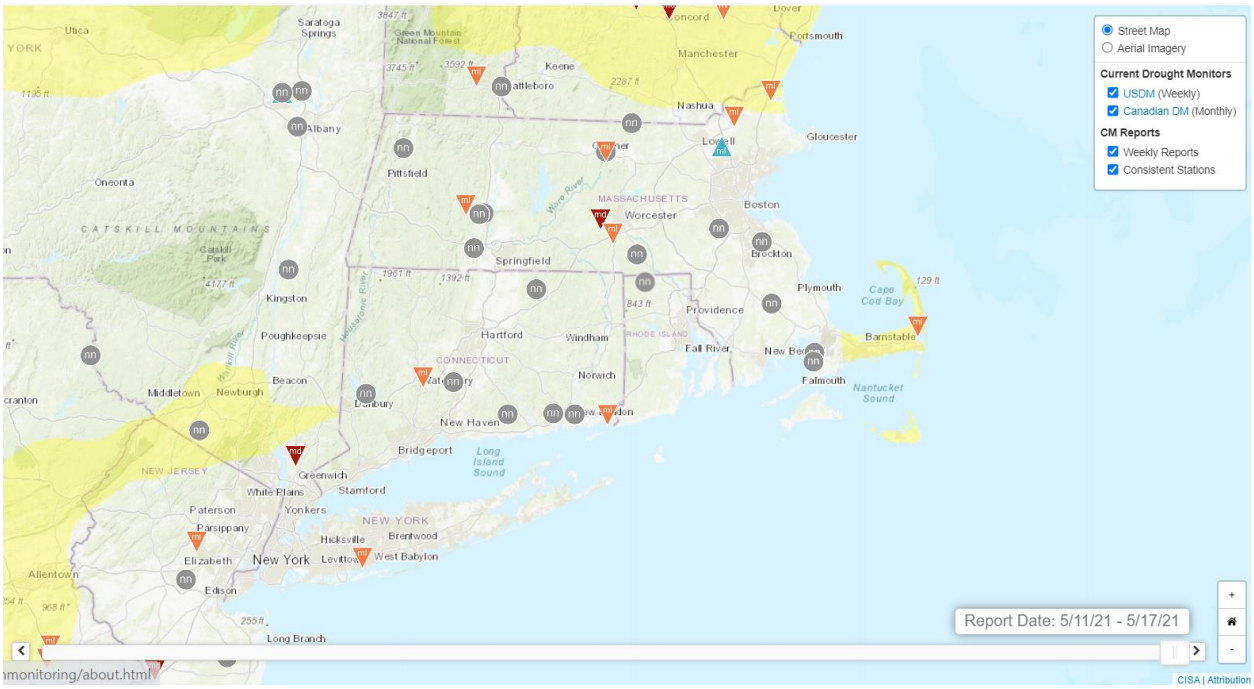


Growing reporting starts with growing recruiting! If you know of someone who would like to measure and map precipitation, ask them to join us at CoCoRaHS.



Condition Monitoring Reports: What impacts are you seeing from the precipitation? Keep watch over conditions where you are!

One report a week is all that we seek. Be a network leader in this dimension of our network. Develop a reputation of being a Consistent Station by submitting over 20 reports in a 52-week timeframe.



Naugatuck 1.7 NNE
Thu May 13 2021

Grass thick but not growing super quick. Our marsh by us is low with water. Hawks are around prowling for birds during the day and birds are quite active with song in the morning.

CT-NH-45 -- General Awareness,Plants And Wildlife

Falmouth 3.1 NNW
Sun May 16 2021

The 1.33" of rain a week ago has kept the lawn and plants growing well. Animals and birds are active and healthy looking. Ponds levels are good. Overall a nice and normal May.

MA-BA-2 -- General Awareness,Plants And Wildlife,Water Supply And Quality

Detail and Summary for April 2021

From the National Weather Service (NWS) Climate sites for April 2021.

April 2021 Regional Precipitation Summary

Location	Station ID	April 2021 Precip	April departure from normal	Feb-Mar-Apr Precip	3 month departure from normal	Nov-Apr Precip	6 month departure from normal	May-Apr Precip	12 month departure from normal
Pittsfield MA	PSF	4.72"	0.86"	9.06"	-0.85"	16.31"	-3.45"	36.05"	-9.33"
Bridgeport CT	BDR	3.22"	-0.91"	10.74"	-0.23"	20.79"	0.00"	40.79"	-1.95"
Hartford CT	BDL	2.76"	-0.96"	8.61"	-1.62"	21.62"	0.36"	35.86"	-10.46"
Worcester MA	ORH	3.13"	-0.98"	8.34"	-3.21"	23.29"	0.15"	41.90"	-6.17"
Providence RI	PVD	3.25"	-1.11"	10.41"	-2.25"	26.51"	1.26"	42.34"	-4.84"
Boston MA	BOS	4.44"	0.70"	9.38"	-1.93"	21.27"	-1.17"	36.32"	-7.45"

May 2021 Outlook

Air Temperature

Precipitation

A = Above normal, B = Below normal,
EC = Equal chances of above/below normal

April Highlights

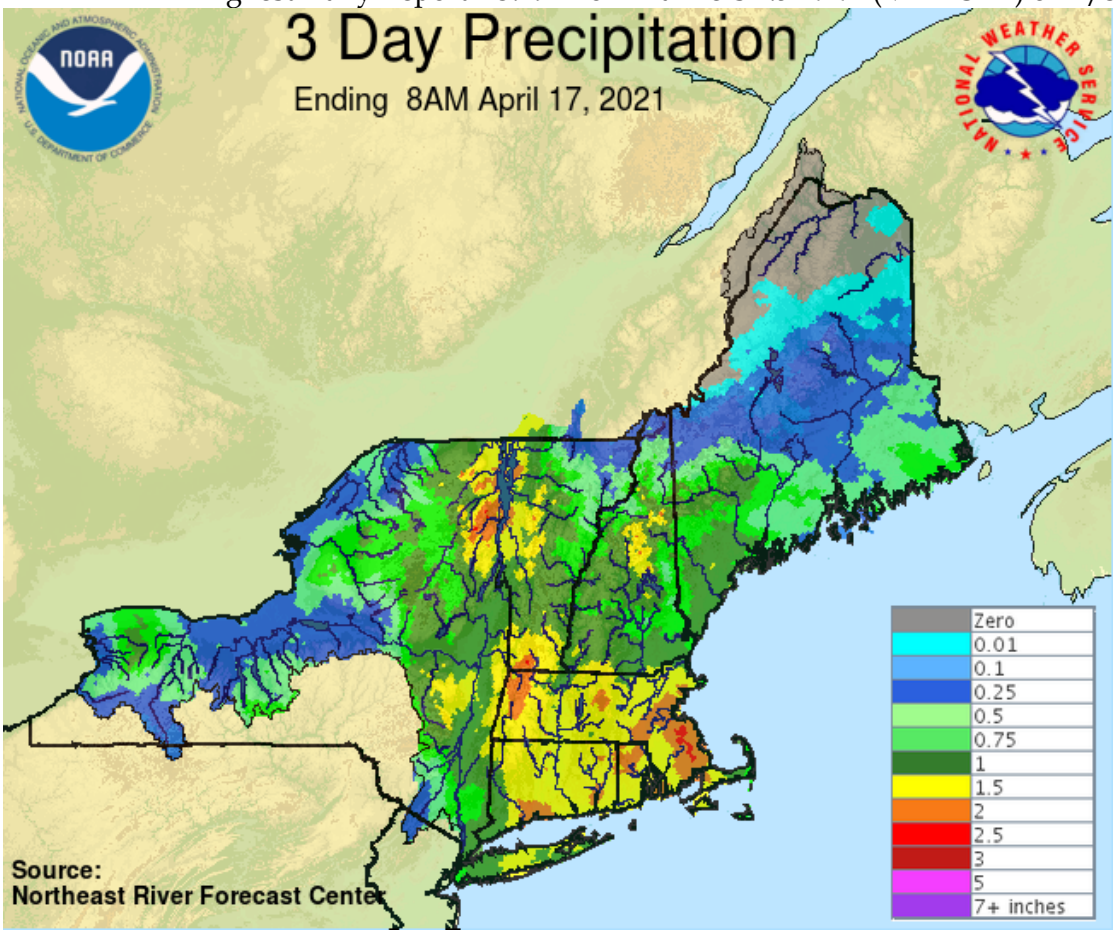
Daily Reports >= 1": 685
Daily Reports >= 2": 60
Daily Reports >= 3": 6

April started strong with rain on the 1st with 2" in New London County and 1" stretching to Plymouth, the Cape and Gloucester. A long stretch of zeros to light rain in Rhode Island on the 10th. A little bit of rain on the 12th & 13th. Widespread rain on the 16th with 2" in New Haven County and 1" for most of the area, with snow in northern sections. Rain on the 17th with 2" rain in eastern sections. Our rain/hail/snow event for the 22nd. Light rain on the 25th & 26th. The month ended as it began with, 2"+ rain in northern sections.

Take in the next section with appreciation of your efforts.

From your reports for April 2021

Observers reporting	**561**
Reported all 30 days	282
Completed by Multi-Day Reports	52
Missing 1 or 2 reports	93
Daily Reports	**13,889**
Zero Reports	7,621
Non-Zero Reports	6,268
Daily Comments	2,662
Multi-Day Reports	193
Condition Monitoring Reports	104
Significant Weather Reports	17
Hail Reports	12
Snowfall Reports	9,966
Snow Depth Reports	4,436
Total SWE Reports	2,764
Highest Daily Report	3.49" from Danvers 2.5 NNE (MA-ES-71) on 4/30



Welcome to nearly 3 dozen new members to this list from around the area, including new locations of Dracut MA, Exeter RI & Colchester CT.

Cover all days in the month, no NA's, no overlapping Multi-Day reports and your station can be listed here. Multi-Day Reports are rising slightly, so be careful with the start and end dates.

This list is sorted by Watershed which is explained further in this 5 minute video.

Watershed	Watershed Name	Station Number	Station Name	Precip
01070004	Nashua			
0107000401	North Nashua River	MA-WR-44	Westminster 0.6 WSW	4.64''
0107000401	North Nashua River	MA-WR-22	Fitchburg 2.0 NNE	5.55''
0107000402	Headwaters Nashua River	MA-WR-56	Sterling 4.3 NW	5.07''
0107000402	Headwaters Nashua River	MA-MD-25	Ayer 0.1 SW	4.83''
0107000402	Headwaters Nashua River	MA-MD-192	Ayer 0.4 SSE	5.07''
0107000403	Squannacook River	MA-MD-47	West Townsend 0.5 W	5.51''
0107000404	Nissitissit River-Nashua River	MA-MD-189	Pepperell 2.2 SSW	5.34''
0107000404	Nissitissit River-Nashua River	MA-MD-169	Pepperell 2.1 SSW	5.47''
01070005	Concord			
0107000501	Sudbury River	MA-MD-89	Sudbury 3.6 W	3.75''
0107000501	Sudbury River	MA-MD-178	Framingham 2.0 NNE	3.85''
0107000501	Sudbury River	MA-MD-193	Sudbury 2.7 NNW	4.41''
0107000501	Sudbury River	MA-MD-107	Framingham 1.7 E	3.46''
0107000502	Concord River	MA-WR-30	Shrewsbury 1.6 NNE	3.58''
0107000502	Concord River	MA-WR-28	Berlin 1.3 WSW	4.10''
0107000502	Concord River	MA-WR-42	Northborough 2.3 N	3.86''
0107000502	Concord River	MA-MD-115	Hudson 1.4 NW	4.48''
0107000502	Concord River	MA-WR-55	Harvard 2.1 S	4.46''
0107000502	Concord River	MA-MD-86	Hudson 1.0 N	4.15''
0107000502	Concord River	MA-MD-12	Acton 1.3 SW	5.15''
0107000502	Concord River	MA-MD-166	Acton 0.5 SW	3.47''
0107000502	Concord River	MA-MD-51	Maynard 0.7 ESE	4.41''
0107000502	Concord River	MA-MD-53	Acton 4.0 ENE	5.09''
0107000502	Concord River	MA-MD-62	Chelmsford 1.2 E	5.82''
01070006	Merrimack River			
0107000612	Stony Brook - Merrimack River	MA-MD-104	Littleton 2.8 NNW	4.59''
0107000612	Stony Brook - Merrimack River	MA-MD-93	Westford 1.5 SSW	3.88''
0107000612	Stony Brook - Merrimack River	MA-MD-187	Dracut 2.4 W	4.45''

0107000613	Shawsheen River	MA-MD-52	Lexington 0.6 SW	4.69''
0107000613	Shawsheen River	MA-ES-48	Andover 0.6 E	7.08''
0107000614	Powwow River - Merrimack River	MA-ES-66	North Andover 0.3 NW	4.67''
0107000614	Powwow River - Merrimack River	MA-ES-20	Haverhill 0.7 N	4.80''
0107000614	Powwow River - Merrimack River	MA-ES-4	Groveland 0.5 WSW	5.39''
0107000614	Powwow River - Merrimack River	MA-ES-61	Amesbury 2.6 WSW	4.28''
0107000614	Powwow River - Merrimack River	MA-ES-59	Amesbury 1.2 N	4.16''
0107000614	Powwow River - Merrimack River	MA-ES-68	Newburyport 1.3 WNW	4.90''
0107000614	Powwow River - Merrimack River	MA-ES-64	Newburyport 0.4 NNW	3.98''
0107000614	Powwow River - Merrimack River	MA-ES-70	Newburyport 0.6 N	5.17''
0107000614	Powwow River - Merrimack River	MA-ES-56	Newburyport 1.0 ESE	3.55''
01080201	Middle Connecticut			
0108020106	Manhan River - Connecticut River	MA-HS-2	Westhampton 1.8 SW	5.58''
0108020106	Manhan River - Connecticut River	MA-HS-8	Williamsburg 1.2 WSW	5.72''
0108020106	Manhan River - Connecticut River	MA-HS-26	Easthampton 0.5 SW	4.96''
0108020106	Manhan River - Connecticut River	MA-HS-48	Easthampton 1.0 E	5.26''
0108020106	Manhan River - Connecticut River	MA-HS-21	Northampton 0.6 ESE	5.05''
0108020106	Manhan River - Connecticut River	MA-FR-12	Sunderland 1.3 SE	5.74''
0108020106	Manhan River - Connecticut River	MA-FR-38	Shutesbury 2.9 SW	4.30''
0108020107	Batchelor Brook - Connecticut River	MA-HD-13	Springfield 4.1 W	4.31''
01080202	Miller			
0108020201	Upper Millers River	NH-CH-20	Rindge 3.2 ESE	5.34''
0108020202	Lower Millers River	MA-FR-40	Warwick 2.7 NNE	4.45''
01080203	Deerfield			
0108020303	North River	MA-FR-31	Colrain 3.7 WNW	4.92''
0108020303	North River	MA-FR-29	Colrain 0.8 WNW	4.68''
0108020305	Lower Deerfield River	MA-FR-17	Buckland 1.8 ESE	5.00''
0108020305	Lower Deerfield River	MA-FR-13	Conway 2.9 NW	4.77''
0108020305	Lower Deerfield River	MA-FR-10	Conway 0.9 SW	5.52''
01080204	Chicopee			
0108020401	Swift River	MA-FR-8	New Salem 3.1 S	3.82''
0108020402	Ware River	MA-WR-54	Barre 1.4 NNE	4.13''
0108020403	Quaboag River	MA-HD-26	Brimfield 3.6 NW	3.40''
0108020403	Quaboag River	MA-WR-75	Warren 2.4 WSW	3.67''
0108020403	Quaboag River	MA-WR-63	Rutland 3.1 SW	4.41''
01080205	Lower Connecticut			
0108020501	Mill River - Connecticut River	CT-HR-82	Suffield 0.5 NNE	3.41''
0108020501	Mill River - Connecticut River	CT-HR-99	Suffield 3.6 ENE	3.30''
0108020501	Mill River - Connecticut River	CT-HR-57	Suffield Depot 3.3 NNE	3.30''
0108020501	Mill River - Connecticut River	MA-HD-33	Agawam 1.1 SSW	3.45''
0108020501	Mill River - Connecticut River	CT-HR-5	Enfield 1.5 SE	3.42''

0108020501	Mill River - Connecticut River	MA-HD-20	Wilbraham 3.7 SSW	3.91''
0108020501	Mill River - Connecticut River	MA-HD-30	Hampden 2.0 NW	4.12''
0108020502	Scantic River	CT-TL-46	Broad Brook 3.3 SE	2.78''
0108020502	Scantic River	CT-TL-26	Broad Brook 2.6 ESE	3.34''
0108020502	Scantic River	CT-TL-41	Somers 0.3 S	3.94''
0108020502	Scantic River	CT-TL-15	Central Somers 0.3 N	3.60''
0108020502	Scantic River	CT-TL-49	Somers 1.2 NE	3.60''
0108020503	Park River	CT-HR-39	Farmington 1.6 SW	3.10''
0108020503	Park River	CT-HR-49	West Hartford 1.1 W	2.88''
0108020503	Park River	CT-HR-63	West Hartford 1.1 NNE	3.46''
0108020503	Park River	CT-HR-85	West Hartford 2.3 NNE	3.19''
0108020504	Hockanum River	CT-HR-100	Manchester 0.4 ENE	3.08''
0108020504	Hockanum River	CT-TL-50	Vernon 1.6 N	2.82''
0108020505	Roaring Brook - Connecticut River	CT-HR-6	Wethersfield 1.2 WSW	3.14''
0108020505	Roaring Brook - Connecticut River	CT-HR-45	Wethersfield 1.9 SSW	3.50''
0108020505	Roaring Brook - Connecticut River	CT-HR-68	Rocky Hill 1.3 E	3.35''
0108020505	Roaring Brook - Connecticut River	CT-HR-22	East Hartford 1.3 E	2.77''
0108020506	Mattabesset River	CT-HR-15	Southington 3.0 E	3.30''
0108020506	Mattabesset River	CT-HR-80	Kensington 0.7 WSW	3.08''
0108020506	Mattabesset River	CT-HR-65	Newington 1.9 SSW	3.19''
0108020506	Mattabesset River	CT-MD-25	Middlefield 0.6 SE	3.06''
0108020507	Higganum Creek - Connecticut River	CT-MD-23	Higganum 0.7 N	3.27''
0108020507	Higganum Creek - Connecticut River	CT-MD-26	Higganum 0.8 NE	3.00''
0108020508	Salmon River	CT-TL-29	Hebron 1.6 SW	3.14''
0108020509	Eightmile River - Connecticut River	CT-MD-18	Essex Village 0.9 S	4.05''
01080206	Westfield			
0108020601	Headwaters Westfield River	MA-HS-7	Plainfield 2.2 SW	5.99''
0108020601	Headwaters Westfield River	MA-HS-14	Plainfield 2.4 ESE	5.37''
0108020603	Outlet Westfield River	MA-HD-31	Westfield 1.6 SSW	4.31''
0108020603	Outlet Westfield River	CT-HR-88	Suffield Depot 6.0 WNW	4.23''
0108020603	Outlet Westfield River	MA-HD-29	West Springfield 1.6 SSW	4.14''
01080207	Farmington			
0108020702	West Branch Farmington River	CT-LT-43	Winsted 3.8 ESE	3.68''
0108020702	West Branch Farmington River	CT-LT-18	New Hartford Center 1.5 N	3.42''
0108020704	Headwaters Farmington River	CT-LT-9	New Hartford Center 3.2 SW	3.19''
0108020704	Headwaters Farmington River	CT-HR-70	Canton 1.5 W	3.11''
0108020704	Headwaters Farmington River	CT-HR-71	Bristol 2.7 NNE	3.32''
0108020704	Headwaters Farmington River	CT-HR-28	North Canton 0.8 SSW	3.62''
0108020705	Salmon Brook	CT-HR-8	North Granby 1.3 ENE	3.83''
01090001	Charles			
0109000101	Plum Island Sound - Frontal Atlantic Ocean	MA-ES-79	Georgetown 1.2 WSW	5.74''

0109000101	Plum Island Sound - Frontal Atlantic Ocean	MA-ES-19	West Newbury 1.8 SSE	5.26''
0109000101	Plum Island Sound - Frontal Atlantic Ocean	MA-ES-24	Newburyport 0.8 SW	4.66''
0109000102	Ipswich River	MA-MD-85	Wilmington 2.2 WNW	6.02''
0109000102	Ipswich River	MA-MD-125	Tewksbury 3.6 SSE	5.99''
0109000102	Ipswich River	MA-MD-160	Reading 1.2 N	6.95''
0109000102	Ipswich River	MA-ES-58	Middleton 1.4 SSW	7.15''
0109000102	Ipswich River	MA-ES-12	Boxford 2.4 S	6.14''
0109000102	Ipswich River	MA-ES-71	Danvers 2.5 NNE	6.51''
0109000103	Essex River - Frontal Atlantic Ocean	MA-ES-41	Danvers 0.8 ESE	6.44''
0109000104	Saugus River - Frontal Broad Sound	MA-MD-81	Wakefield 0.5 NNW	5.10''
0109000104	Saugus River - Frontal Broad Sound	MA-MD-126	Melrose 0.5 NE	5.09''
0109000104	Saugus River - Frontal Broad Sound	MA-ES-76	Nahant 0.7 N	4.79''
0109000104	Saugus River - Frontal Broad Sound	MA-ES-45	Nahant 0.4 N	4.85''
0109000104	Saugus River - Frontal Broad Sound	MA-ES-8	Marblehead 0.8 SW	5.61''
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-123	Lexington 1.3 SE	5.20''
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-182	Lexington 2.1 ESE	5.86''
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-175	Arlington 0.4 WNW	5.04''
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-7	Winchester 0.7 SE	5.58''
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-44	Medford 1.2 W	5.33''
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-11	Cambridge 0.9 NNW	5.41''
0109000105	Mystic River - Frontal Boston Harbor	MA-SF-10	Chelsea 0.8 N	5.06''
0109000106	Upper Charles River	MA-WR-1	Milford 2.3 NNW	3.65''
0109000106	Upper Charles River	MA-MD-55	Holliston 0.7 W	3.72''
0109000106	Upper Charles River	MA-NF-64	Medway 2.1 W	3.54''
0109000106	Upper Charles River	MA-MD-42	Holliston 0.8 S	3.78''
0109000106	Upper Charles River	MA-NF-62	Franklin 1.4 SW	3.85''
0109000106	Upper Charles River	MA-MD-158	Sherborn 1.1 NW	3.77''
0109000106	Upper Charles River	MA-NF-63	Norfolk 1.1 W	4.20''
0109000106	Upper Charles River	MA-NF-50	Millis 1.4 ENE	3.78''
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-120	Natick 1.9 NNE	4.28''
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-80	Lincoln 1.5 SW	3.79''
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-134	Somerville 0.5 SSE	5.47''
0109000108	Neponset River - Frontal Boston Harbor	MA-NF-1	Norwood 1.3 NW	4.23''
0109000108	Neponset River - Frontal Boston Harbor	MA-NF-54	Quincy 1.2 W	4.68''
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-NF-68	Quincy 1.5 SSE	4.86''
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-NF-39	Weymouth 2.3 N	4.93''
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-PL-36	Hingham 0.8 ESE	5.25''
01090002	Cape Cod			
0109000201	North River - Frontal Massachusetts Bay	MA-PL-57	Hanson 1.8 N	5.52''
0109000201	North River - Frontal Massachusetts Bay	MA-PL-5	Kingston 3.3 WNW	5.78''
0109000202	Cape Cod	MA-BA-2	Falmouth 3.1 NNW	3.68''

0109000202	Cape Cod	MA-BA-57	Falmouth 5.7 N	3.25''
0109000202	Cape Cod	MA-BA-50	Falmouth 5.4 NNE	3.76''
0109000202	Cape Cod	MA-BA-3	Falmouth 3.0 E	3.82''
0109000202	Cape Cod	MA-BA-11	East Falmouth 1.4 ESE	3.62''
0109000202	Cape Cod	MA-BA-83	Mashpee 2.5 W	3.90''
0109000202	Cape Cod	MA-BA-18	Waquoit 0.6 SSW	3.99''
0109000202	Cape Cod	MA-BA-45	Sandwich 0.9 NNE	3.59''
0109000202	Cape Cod	MA-BA-64	Sandwich 1.5 SSE	4.04''
0109000202	Cape Cod	MA-BA-79	Mashpee 0.8 SSW	4.18''
0109000202	Cape Cod	MA-BA-78	Mashpee 4.6 S	3.86''
0109000202	Cape Cod	MA-BA-10	East Sandwich 2.3 SE	4.68''
0109000202	Cape Cod	MA-BA-59	Barnstable 3.6 W	4.40''
0109000202	Cape Cod	MA-BA-60	Hyannis 0.7 WNW	3.79''
0109000202	Cape Cod	MA-BA-76	Barnstable 0.7 NE	3.99''
0109000202	Cape Cod	MA-BA-22	Yarmouth 0.9 NNW	3.98''
0109000202	Cape Cod	MA-BA-72	Yarmouth 2.0 S	4.10''
0109000202	Cape Cod	MA-BA-77	South Dennis 1.0 NW	3.84''
0109000202	Cape Cod	MA-BA-52	Truro 0.8 E	3.74''
0109000202	Cape Cod	MA-BA-27	Wellfleet 0.7 NW	3.44''
0109000202	Cape Cod	MA-BA-68	Eastham 1.9 WSW	2.81''
0109000202	Cape Cod	MA-BA-51	Orleans 3.0 S	3.38''
0109000202	Cape Cod	MA-BA-12	Orleans 1.1 E	2.87''
0109000202	Cape Cod	MA-BA-30	Eastham 0.6 SW	2.97''
0109000202	Cape Cod	MA-BA-43	Chatham 0.4 WSW	3.27''
0109000203	Mattapoisett River - Frontal Buzzards Bay	MA-BR-79	Fairhaven 1.9 ENE	3.57''
0109000203	Mattapoisett River - Frontal Buzzards Bay	MA-PL-52	Plymouth 10.6 SSE	4.21''
0109000204	Paskamanset River - Frontal Buzzards Bay	MA-BR-14	Dartmouth 2.5 SSW	3.66''
0109000204	Paskamanset River - Frontal Buzzards Bay	MA-BR-52	New Bedford 4.3 N	3.85''
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-5	Little Compton 1.7 NW	3.49''
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-17	Tiverton 4.4 SSE	4.07''
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-7	Little Compton 0.6 E	3.47''
0109000205	Sakonnet Point - Frontal Rhode Island Sound	MA-BR-37	Westport 0.9 ESE	4.17''
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-21	Chilmark 0.9 E	3.79''
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-5	West Tisbury 2.9 N	3.92''
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-2	Vineyard Haven 0.8 WSW	3.94''
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-18	Oak Bluffs 0.1 SW	4.21''
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-22	Edgartown 1.3 WNW	4.24''
01090003	Blackstone			
0109000301	Upper Blackstone River	MA-WR-41	Auburn 2.6 SW	3.38''
0109000301	Upper Blackstone River	MA-WR-43	Leicester 2.4 ESE	3.32''
0109000301	Upper Blackstone River	MA-WR-97	Worcester 1.0 WSW	3.29''

0109000301	Upper Blackstone River	MA-WR-81	Worcester 1.6 SE	3.25''
0109000301	Upper Blackstone River	MA-WR-100	Douglas 1.9 NNE	3.53''
0109000301	Upper Blackstone River	MA-WR-70	Grafton 1.5 W	4.22''
0109000302	Lower Blackstone River	MA-WR-90	Upton 0.4 NE	3.62''
0109000302	Lower Blackstone River	RI-PR-28	North Smithfield 0.7 SE	4.29''
0109000302	Lower Blackstone River	RI-PR-89	Woonsocket 1.8 WNW	4.03''
0109000302	Lower Blackstone River	RI-PR-45	Manville 0.4 WSW	4.14''
0109000302	Lower Blackstone River	RI-PR-59	Cumberland Hill 0.9 NW	4.42''
0109000302	Lower Blackstone River	RI-PR-55	Cumberland Hill 3.6 NNE	4.30''
01090004	Narragansett			
0109000401	Upper Taunton River	MA-BR-30	Taunton 3.9 N	4.37''
0109000401	Upper Taunton River	MA-NF-31	Stoughton 1.2 E	4.69''
0109000401	Upper Taunton River	MA-PL-22	East Bridgewater 0.3 WSW	4.72''
0109000401	Upper Taunton River	MA-PL-15	Abington 1.2 NNE	4.97''
0109000401	Upper Taunton River	MA-PL-60	Abington 1.7 ESE	5.47''
0109000401	Upper Taunton River	MA-PL-23	Pembroke 2.8 SW	5.06''
0109000402	Middle Taunton River	MA-PL-31	Bridgewater 1.8 SE	4.82''
0109000402	Middle Taunton River	MA-PL-61	Middleborough 3.5 SSE	4.35''
0109000402	Middle Taunton River	MA-PL-17	Plympton 0.9 NNE	4.53''
0109000403	Threemile River	MA-NF-19	Foxborough 1.8 SSW	4.10''
0109000403	Threemile River	MA-BR-55	NWS Boston/Norton 2.5 ESE	4.46''
0109000404	Ten Mile River	RI-PR-115	East Providence 3.2 N	3.96''
0109000404	Ten Mile River	MA-BR-23	Attleboro 0.9 ENE	3.91''
0109000405	Wonnasquatucket River-Moshassuck River	RI-PR-33	Greenville 0.7 NNW	4.43''
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-51	North Smithfield 0.6 S	4.34''
0109000406	Pawtuxet River	RI-KN-51	Coventry 3.7 W	4.23''
0109000406	Pawtuxet River	RI-KN-21	Coventry 1.9 NE	4.13''
0109000406	Pawtuxet River	RI-PR-111	Cranston 1.5 SW	4.01''
0109000406	Pawtuxet River	RI-PR-57	Cranston 1.2 SSE	4.05''
0109000406	Pawtuxet River	RI-PR-44	Cranston 4.2 ENE	4.04''
0109000407	Palmer River	RI-BR-11	Bristol 2.0 NNW	3.86''
0109000407	Palmer River	MA-BR-2	Rehoboth 2.1 N	4.10''
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-61	Mansfield 2.4 ENE	4.18''
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-3	Norton 1.8 NNE	4.23''
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-16	Somerset 0.4 SSE	4.40''
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-64	Somerset 0.8 NE	4.33''
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-72	Somerset 2.3 NNE	4.23''
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-58	Dighton 3.3 NNW	4.25''
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-8	Dighton 1.1 WSW	3.90''
0109000409	Narragansett Bay	RI-KN-17	East Greenwich 1.2 NNE	4.03''
0109000409	Narragansett Bay	RI-WS-54	North Kingstown 2.7 WSW	4.21''

0109000409	Narragansett Bay	RI-WS-50	North Kingstown 3.1 NW	4.66''
0109000409	Narragansett Bay	RI-WS-31	Kingston 7.5 NNE	4.06''
0109000409	Narragansett Bay	RI-KN-45	East Greenwich 2.8 NE	4.13''
0109000409	Narragansett Bay	RI-WS-44	North Kingston 1.5 SSW	4.03''
0109000409	Narragansett Bay	RI-KN-15	Warwick 4.3 SSW	3.85''
0109000409	Narragansett Bay	RI-WS-66	Narragansett 2.9 N	3.82''
0109000409	Narragansett Bay	RI-KN-2	East Greenwich 2.3 ESE	4.03''
0109000409	Narragansett Bay	RI-KN-23	Warwick 3.2 NNE	3.91''
0109000409	Narragansett Bay	RI-KN-31	Warwick 0.8 ENE	3.84''
0109000409	Narragansett Bay	RI-KN-37	Warwick 2.3 NNE	3.81''
0109000409	Narragansett Bay	RI-PR-67	Providence 1.6 NE	3.57''
0109000409	Narragansett Bay	RI-KN-38	Warwick 3.9 NNE	3.67''
0109000409	Narragansett Bay	RI-PR-104	Providence 2.1 NE	3.52''
0109000409	Narragansett Bay	RI-PR-84	Providence 2.7 NNE	3.66''
0109000409	Narragansett Bay	RI-NW-18	Jamestown 0.3 SSE	3.50''
0109000409	Narragansett Bay	RI-PR-77	Riverside 0.8 SE	3.85''
0109000409	Narragansett Bay	RI-NW-27	Newport 1.3 SW	3.38''
0109000409	Narragansett Bay	RI-NW-4	Middletown 1.1 SW	2.24''
0109000409	Narragansett Bay	RI-NW-16	Portsmouth 1.3 S	3.62''
0109000409	Narragansett Bay	RI-NW-32	Portsmouth 5.2 SSE	3.40''
0109000409	Narragansett Bay	MA-BR-63	Swansea 2.1 W	3.99''
0109000409	Narragansett Bay	RI-NW-20	Tiverton 1.0 SSW	3.78''
01090005	Pawcatuck-Wood			
0109000501	Wood River	RI-WS-1	Hope Valley 3.7 S	3.63''
0109000501	Wood River	RI-WS-64	Hope Valley 1.8 NE	4.17''
0109000502	Upper Pawcatuck River	RI-WS-51	Richmond 2.4 SSE	3.73''
0109000502	Upper Pawcatuck River	RI-WS-42	Richmond 4.6 NNE	3.84''
0109000502	Upper Pawcatuck River	RI-WS-45	Charlestown 4.7 NNE	3.90''
0109000502	Upper Pawcatuck River	RI-WS-80	South Kingston 4.3 WSW	3.68''
0109000502	Upper Pawcatuck River	RI-WS-37	Kingston 2.4 SW	3.58''
0109000502	Upper Pawcatuck River	RI-WS-69	Exeter 3.9 S	4.16''
0109000503	Lower Pawcatuck River	CT-NL-40	Pawcatuck 1.8 SSE	3.66''
0109000503	Lower Pawcatuck River	RI-WS-30	Westerly 2.4 NNW	3.85''
0109000503	Lower Pawcatuck River	RI-WS-47	Westerly 0.8 WNW	3.60''
0109000504	Frontal Block Island Sound	RI-WS-36	Charlestown 3.0 WSW	3.82''
0109000504	Frontal Block Island Sound	RI-WS-58	Kingston 0.3 SW	3.66''
0109000504	Frontal Block Island Sound	RI-WS-65	Wakefield-Peacedale 0.9 W	3.56''
0109000504	Frontal Block Island Sound	RI-WS-81	Wakefield-Peacedale 0.4 SW	3.45''
0109000504	Frontal Block Island Sound	RI-WS-55	Wakefield 0.8 ENE	3.80''
0109000504	Frontal Block Island Sound	RI-WS-70	Wakefield-Peacedale 1.7 NNE	3.73''
01100001	Quinebaug			

0110000102	French River	MA-WR-88	Leicester 2.5 WSW	3.57''
0110000102	French River	MA-WR-68	Oxford 0.9 SSW	3.94''
0110000103	Fivemile River	CT-WN-6	Dayville 2.0 ENE	4.12''
0110000105	Moosup River	RI-KN-14	Greene 1.4 E	5.03''
0110000106	Pachaug River	CT-NL-21	Griswold 0.9 N	4.21''
01100002	Shetucket			
0110000201	Willimantic River	CT-TL-33	Tolland 3.6 NNE	3.38''
0110000201	Willimantic River	CT-TL-24	Stafford Springs 0.8 NE	3.51''
0110000201	Willimantic River	CT-TL-2	Staffordville 0.4 NNW	3.64''
0110000202	Natchaug River	CT-TL-27	Willington 2.7 SE	3.15''
0110000202	Natchaug River	CT-TL-30	Mansfield Center 2.7 NE	3.18''
0110000202	Natchaug River	CT-WN-12	Eastford 2.0 W	3.24''
0110000203	Shetucket River	CT-NL-10	Norwich 2.5 NNE	4.27''
01100003	Thames			
0110000301	Yantic River	CT-NL-53	Colchester 1.7 ENE	3.12''
0110000302	Thames River-Frontal New London Harbor	CT-NL-5	Oakdale 2.6 WNW	4.32''
0110000302	Thames River-Frontal New London Harbor	CT-NL-6	New London 1.0 NNW	4.79''
0110000302	Thames River-Frontal New London Harbor	CT-NL-50	Norwich 5.4 SE	4.98''
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-38	Old Lyme 3.4 ESE	4.79''
0110000303	Mystic River - Fronter Fishers Island Sound	CT-NL-62	Salem 3.6 SE	3.95''
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-29	East Lyme 0.5 SW	4.93''
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-32	Niantic 1.1 SW	4.72''
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-22	Central Waterford 2.7 SSW	4.58''
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-46	Mystic 3.4 NW	4.98''
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-37	Mystic 1.6 W	4.88''
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-19	Mystic 0.9 W	4.83''
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-24	Stonington 1.4 NNW	3.98''
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-18	Stonington 0.5 NNE	4.08''
01100004	Quinnipiac			
0110000401	Quinnipiac River	CT-NH-14	Prospect 1.9 ENE	3.33''
0110000401	Quinnipiac River	CT-HR-83	Plainville 1.7 SW	3.29''
0110000401	Quinnipiac River	CT-HR-23	Southington 0.9 SSE	3.08''
0110000401	Quinnipiac River	CT-HR-76	Southington 1.0 ENE	2.71''
0110000401	Quinnipiac River	CT-NH-44	Wallingford Center 1.9 WNW	3.37''
0110000401	Quinnipiac River	CT-NH-43	Wallingford Center 3.3 NNW	3.24''
0110000401	Quinnipiac River	CT-NH-75	Meriden 2.8 WSW	3.40''
0110000401	Quinnipiac River	CT-NH-42	Wallingford Center 1.1 N	3.06''
0110000401	Quinnipiac River	CT-NH-72	Northford 0.8 SW	4.68''
0110000402	Hammonasset River - Frontal Long Island Sound	CT-NH-21	East Haven 3.5 SSW	3.82''
0110000402	Hammonasset River - Frontal Long Island Sound	CT-NH-60	Branford Center 1.9 SSW	3.61''
0110000402	Hammonasset River - Frontal Long Island Sound	CT-NH-56	Guilford Center 2.7 WSW	4.07''

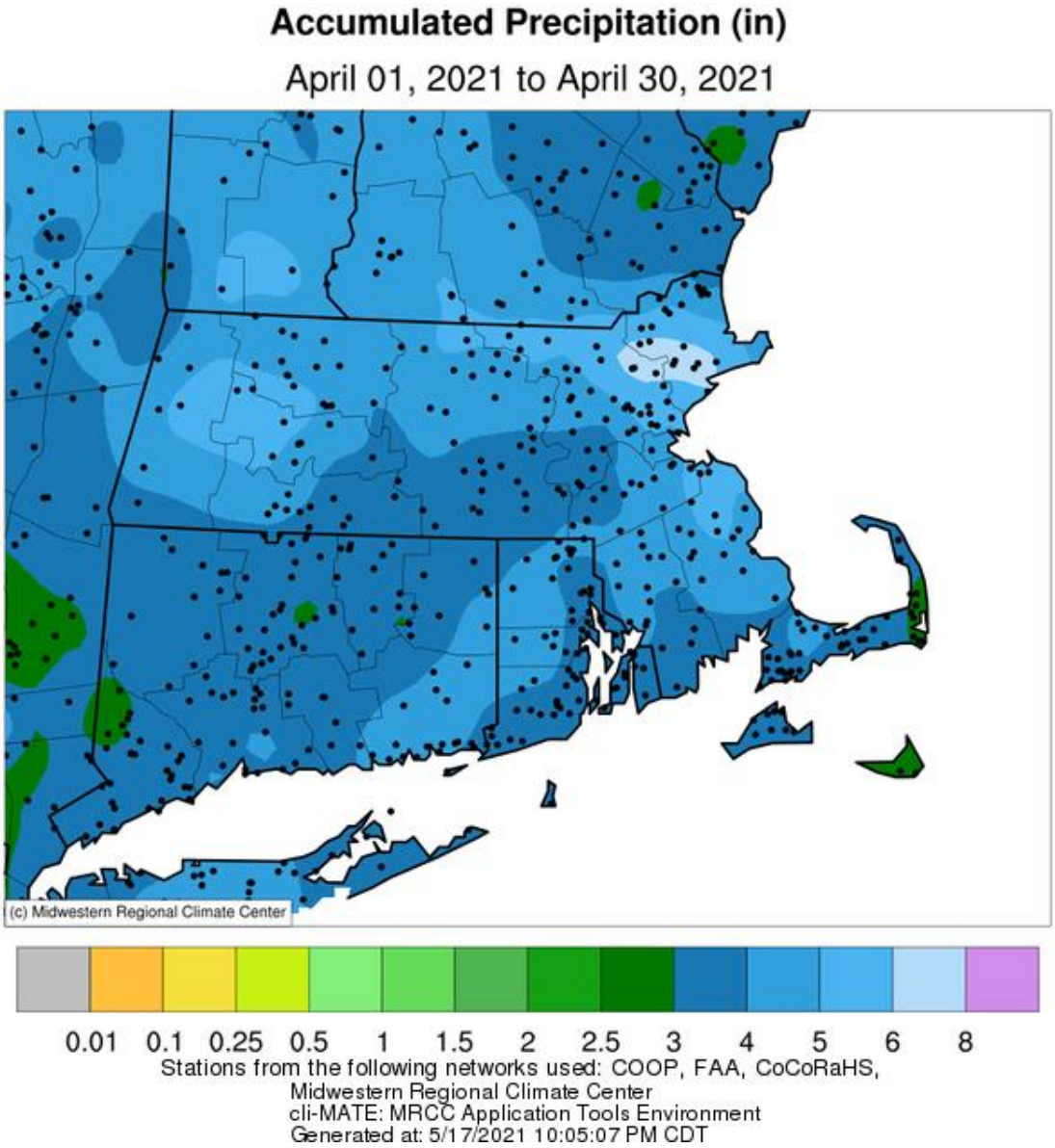
0110000402	Hammonasset River - Frontal Long Island Sound	CT-NH-50	Madison Center 4.1 N	3.60''
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-21	Killingworth 2.6 ESE	3.38''
0110000403	Mill River - Frontal Long Island Sound	CT-NH-39	West Haven 0.8 W	4.56''
0110000403	Mill River - Frontal Long Island Sound	CT-NH-57	New Haven 2.9 NNW	4.07''
01100005	Housatonic			
0110000502	Williams River - Housatonic River	MA-BE-23	Sheffield 1.6 NW	3.78''
0110000503	Konkapot River-Housatonic River	CT-LT-28	Canaan 4.2 ESE	3.01''
0110000504	Macedonia Brook - Housatonic River	CT-LT-20	Warren 2.4 WNW	3.40''
0110000506	Candlewood Lake-Housatonic River	CT-LT-37	New Milford 3.1 WNW	2.99''
0110000506	Candlewood Lake-Housatonic River	CT-LT-22	New Milford 5.3 SSW	2.81''
0110000508	Still River - Housatonic River	CT-FR-43	Bethel 0.5 E	3.61''
0110000508	Still River - Housatonic River	CT-FR-9	Brookfield 3.3 SSE	2.87''
0110000509	Pomperaug River	CT-LT-34	Woodbury Center 1.5 SSW	3.41''
0110000512	Outlet Naugatuck River	CT-LT-14	Watertown 0.5 S	3.23''
0110000512	Outlet Naugatuck River	CT-NH-80	Seymour 1.2 WSW	2.89''
0110000512	Outlet Naugatuck River	CT-NH-67	Waterbury 1.3 WNW	3.91''
0110000512	Outlet Naugatuck River	CT-NH-45	Naugatuck 1.7 NNE	3.17''
0110000512	Outlet Naugatuck River	CT-NH-22	Prospect 0.5 SW	3.13''
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-77	Shelton 2.3 WSW	3.12''
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-23	Shelton 1.3 W	3.10''
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-46	Stratford 0.2 ESE	4.56''
01100006	Saugatuck			
0110000601	Saugatuck River - Frontal Long Island Sound	CT-FR-58	Ridgefield 3.6 N	2.89''
0110000601	Saugatuck River - Frontal Long Island Sound	CT-FR-64	Bethel 4.5 SSE	3.21''
0110000601	Saugatuck River - Frontal Long Island Sound	CT-FR-31	Newtown 4.6 SSW	3.07''
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-63	Wilton 1.9 NW	3.94''
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-3	New Canaan 1.9 ENE	3.52''
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-25	Norwalk 2.9 NNW	3.59''
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-20	Westport 2.5 ENE	3.38''
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-68	Fairfield 1.1 SSE	3.27''
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-60	Fairfield 1.5 NE	3.69''
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-57	Trumbull 0.9 W	3.57''
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-32	Monroe 0.8 W	3.33''
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-70	Bridgeport 2.9 NNW	3.91''
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-67	Trumbull 1.2 S	3.84''
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-26	Stratford 0.9 W	3.61''
0110000604	Mianus River-Rippowam River	CT-FR-39	Stamford 4.2 S	3.67''
0110000604	Mianus River-Rippowam River	CT-FR-83	Darien 2.4 NW	3.50''
0110000604	Mianus River-Rippowam River	CT-FR-35	Darien 1.8 ENE	3.02''
02020003	Hudson-Hoosic			
0202000306	Upper Hoosic River	MA-BE-21	Cheshire 0.5 NNW	4.64''

02020006	Middle Hudson			
0202000603	Wynants Kill - Hudson River	NY-AB-21	NWS Albany	3.69''
02030203	Long Island Sound			
0203020300	Long Island Sound	NY-SF-114	Fishers Island 0.5 NE	3.94''
10190007	Cache La Poudre			
1019000708	Horsetooth Reservoir - Cache La Poudre River	CO-LR-273	FCL 2.2 NW	2.17''
19020401	Anchorage			
1902040107	Rabbit Creek - Frontal Turnagain Arm	AK-AB-55	Anchorage 7.6 SSE	0.33''

You can see the few days where the heaviest of rains swept across the area. Look for the lighter shades of blue.

For the new observers: When you get started, measure and report every day. Do so for a few months. By doing so, the Climate Centers will pick up on your new station, and the dot of your station can and will appear on this map.

We watch the weather. We define the climate.



We do not live at the airport"

An average of 3.14" of precip in this list. Our list of complete stations averaged 4.07". Even in April, we can find the variability of precipitation.

This table is provided so that you can compare your station precip totals to any nearby airport. Why the big differences between yours and these? Our network does not use automated gauges. And we do not live at the airport!

Location	Station ID	Apr 2021 Precip	Apr departure from normal	Feb-Mar-Apr Precip	3 month departure from normal	Nov-Apr Precip	6 month departure from normal	May-Apr Precip	12 month departure from normal
White Plains NY	HPN	2.97''	-1.43''	8.04''	-3.87''	15.56''	-8.42''	35.92''	-13.43''
Danbury CT	DXR	2.11''	-2.13''	6.28''	-4.83''	16.98''	-5.84''	38.65''	-11.22''
New Haven CT	HVN	3.23''	-1.21''	8.60''	-3.02''	18.02''	-4.33''	32.96''	-14.15''
Meriden CT	MMK	2.85''	-1.59''	9.42''	-2.20''	22.14''	-0.21''	40.88''	-6.23''
Hartford CT	HFD	2.58''	-1.30''	7.21''	-2.89''	18.86''	-1.58''	35.55''	-8.05''
Willimantic CT	IJD	2.12''	-2.31''	5.61''	-6.22''	17.63''	-6.23''	32.93''	-15.49''
New London CT	GON	2.91''	-1.50''	9.56''	-1.87''	22.10''	-0.64''	34.84''	-11.65''
Westerly RI	WST	2.55''	-2.09''	7.28''	-5.19''	19.48''	-4.66''	34.01''	-13.38''
Newport RI	UUU	3.02''	-1.53''	8.91''	-3.29''	22.02''	-2.06''	35.96''	-10.37''
New Bedford MA	EWB	3.09''	-1.41''	9.08''	-3.97''	20.08''	-5.52''	29.52''	-18.84''
Hyannis MA	HYA	2.81''	-1.70''	8.44''	-4.56''	20.31''	-5.48''	31.13''	-16.56''
Nantucket MA	ACK	2.23''	-1.51''	6.57''	-4.14''	18.75''	-3.80''	31.63''	-12.79''
Marthas Vineyard MA	MVY	3.57''	-0.27''	9.93''	-1.67''	19.61''	-3.76''	32.37''	-12.79''
Taunton MA	TAN	3.78''	-0.83''	9.88''	-3.40''	22.53''	-3.55''	38.97''	-10.77''
Plymouth MA	PYM	4.79''	0.15''	13.37''	-0.12''	27.20''	0.97''	42.34''	-6.81''
Norwood MA	OWD	3.55''	-0.64''	9.37''	-2.52''	23.01''	-0.88''	41.64''	-5.42''
Bedford MA	BED	4.48''	0.39''	8.58''	-2.77''	19.99''	-2.80''	33.95''	-11.76''
Lawrence MA	LWM	2.47''	-1.35''	6.78''	-3.95''	16.85''	-3.71''	34.05''	-9.11''
Fitchburg MA	FIT	4.22''	0.10''	8.16''	-3.34''	20.46''	-2.36''	33.74''	-13.40''
Orange MA	ORE	1.55''	-1.77''	7.05''	-2.40''	16.33''	-2.93''	31.98''	-10.57''
Westfield MA	BAF	4.18''	-0.19''	8.19''	-3.11''	19.82''	-2.29''	37.04''	-11.35''
North Adams MA	AQW	4.07''	0.24''	7.51''	-2.44''	16.76''	-3.19''	33.79''	-12.82''

Rulers of the Snow

We are the Rulers of the Snow. We define where the snow is and where it is not.

A list of 85 stations in April, plus a little extra with our friends, who reported snow fall and snow depth for all days. This list represents about **10% of all stations** that did so across the entire network in April.

Using the mobile app? Look at the 2nd page of the mobile app, and fill in those snow values. Make a snow fall and snow depth measurement with every Daily Report, if you can safely do so, ***all year round.***

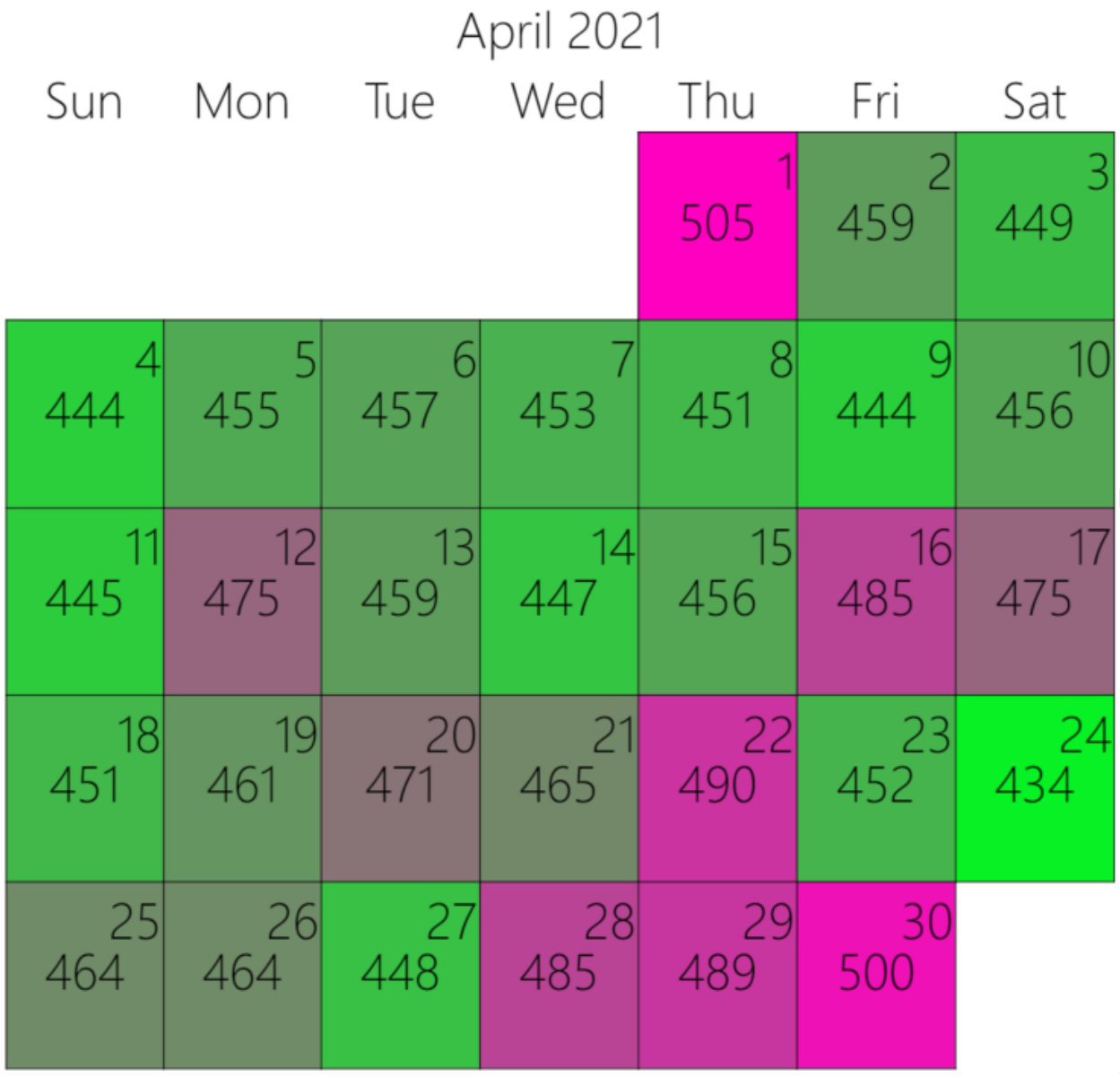
Station	Name	Apr 2021 Snowfall	Station	Name	Apr 2021 Snowfall
MA-HD-30	Hampden 2.0 NW	6.2''	CT-NH-57	New Haven 2.9 NNW	0.0''
CT-TL-24	Stafford Springs 0.8 NE	6.0''	CT-NH-72	Northford 0.8 SW	0.0''
MA-WR-75	Warren 2.4 WSW	6.0''	CT-HR-22	East Hartford 1.3 E	0.0''
MA-FR-17	Buckland 1.8 ESE	5.8''	CT-MD-21	Killingworth 2.6 ESE	0.0''
CT-TL-2	Staffordville 0.4 NNW	5.8''	CT-MD-23	Higganum 0.7 N	0.0''
RI-KN-14	Greene 1.4 E	5.3''	CT-MD-25	Middlefield 0.6 SE	0.0''
MA-WR-88	Leicester 2.5 WSW	5.1''	CT-NL-18	Stonington 0.5 NNE	0.0''
MA-HS-7	Plainfield 2.2 SW	4.4''	CT-NL-24	Stonington 1.4 NNW	0.0''
MA-WR-41	Auburn 2.6 SW	4.2''	CT-NL-29	East Lyme 0.5 SW	0.0''
MA-BE-21	Cheshire 0.5 NNW	3.4''	CT-NL-32	Niantic 1.1 SW	0.0''
CT-TL-27	Willington 2.7 SE	3.0''	CT-NL-40	Pawcatuck 1.8 SSE	0.0''
MA-MD-115	Hudson 1.4 NW	2.7''	CT-NL-6	New London 1.0 NNW	0.0''
MA-MD-12	Acton 1.3 SW	2.7''	RI-KN-2	East Greenwich 2.3 ESE	0.0''
MA-WR-42	Northborough 2.3 N	2.6''	RI-KN-45	East Greenwich 2.8 NE	0.0''
MA-MD-51	Maynard 0.7 ESE	2.5''	RI-WS-31	Kingston 7.5 NNE	0.0''
MA-FR-13	Conway 2.9 NW	2.2''	RI-WS-37	Kingston 2.4 SW	0.0''
MA-MD-125	Tewksbury 3.6 SSE	2.1''	RI-WS-47	Westerly 0.8 WNW	0.0''
MA-MD-85	Wilmington 2.2 WNW	2.0''	RI-WS-55	Wakefield 0.8 ENE	0.0''
RI-PR-33	Greenville 0.7 NNW	1.9''	RI-NW-7	Little Compton 0.6 E	0.0''
MA-FR-12	Sunderland 1.3 SE	1.7''	MA-BR-30	Taunton 3.9 N	0.0''
MA-ES-4	Groveland 0.5 WSW	1.7''	MA-BR-61	Mansfield 2.4 ENE	0.0''
MA-FR-10	Conway 0.9 SW	1.5''	MA-BR-8	Dighton 1.1 WSW	0.0''
RI-PR-51	North Smithfield 0.6 S	1.5''	MA-MD-107	Framingham 1.7 E	0.0''
MA-MD-47	West Townsend 0.5 W	1.4''	MA-MD-42	Holliston 0.8 S	0.0''

AK-AB-55	Anchorage 7.6 SSE	1.4''	MA-ES-41	Danvers 0.8 ESE	0.0''
RI-PR-28	North Smithfield 0.7 SE	1.3''	MA-ES-58	Middleton 1.4 SSW	0.0''
MA-ES-61	Amesbury 2.6 WSW	0.8''	MA-ES-70	Newburyport 0.6 N	0.0''
CT-NL-10	Norwich 2.5 NNE	0.6''	MA-ES-71	Danvers 2.5 NNE	0.0''
MA-HS-48	Easthampton 1.0 E	0.5''	MA-NF-64	Medway 2.1 W	0.0''
MA-MD-126	Melrose 0.5 NE	0.5''	MA-PL-15	Abington 1.2 NNE	0.0''
MA-ES-48	Andover 0.6 E	0.5''	MA-PL-22	East Bridgewater 0.3 WSW	0.0''
MA-NF-1	Norwood 1.3 NW	0.5''	MA-PL-36	Hingham 0.8 ESE	0.0''
RI-WS-42	Richmond 4.6 NNE	0.4''	MA-PL-60	Abington 1.7 ESE	0.0''
CT-LT-9	New Hartford Center 3.2 SW	0.3''	MA-BA-12	Orleans 1.1 E	0.0''
CT-NL-21	Griswold 0.9 N	0.3''	MA-BA-2	Falmouth 3.1 NNW	0.0''
MA-ES-12	Boxford 2.4 S	0.2''	MA-BA-3	Falmouth 3.0 E	0.0''
NY-AB-21	NWS Albany	0.2''	MA-BA-45	Sandwich 0.9 NNE	0.0''
CT-LT-22	New Milford 5.3 SSW	0.0''	MA-BA-50	Falmouth 5.4 NNE	0.0''
CT-LT-34	Woodbury Center 1.5 SSW	0.0''	MA-BA-51	Orleans 3.0 S	0.0''
CT-FR-25	Norwalk 2.9 NNW	0.0''	MA-BA-57	Falmouth 5.7 N	0.0''
CT-FR-3	New Canaan 1.9 ENE	0.0''	MA-BA-72	Yarmouth 2.0 S	0.0''
CT-FR-9	Brookfield 3.3 SSE	0.0''	MA-BA-76	Barnstable 0.7 NE	0.0''
CT-NH-43	Wallingford Center 3.3 NNW	0.0''	MA-DK-22	Edgartown 1.3 WNW	0.0''
CT-NH-45	Naugatuck 1.7 NNE	0.0''	NY-SF-114	Fishers Island 0.5 NE	0.0''

April 2021 as a calendar. Bright magenta for the highest number of reports. Green for the lowest number of reports.

505 reports for the day! That's a single day record!

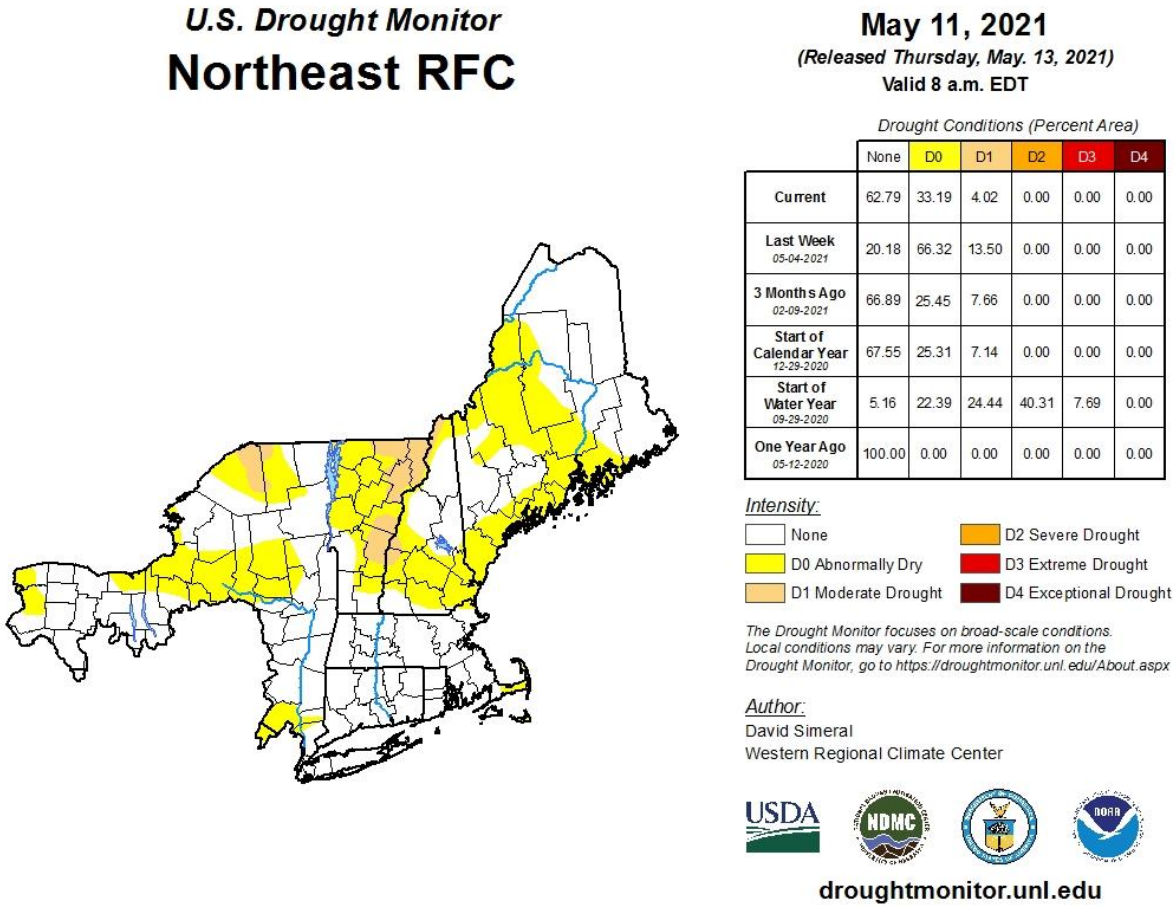
463 Reports per Day was is our new single month reporting average.



Rains in the first two weeks of May, erased D0 from much of our area. But the pendulum of precipitation is about to swing back to drier conditions.

Please continue to report the conditions where you are. Strive to be a "Consistent Station" by submitting over 20 Condition Monitoring Reports in a 52 week period.

Every drop counts and zeros do too!



For a viewing explanation on the Drought Monitor, the CoCoRaHS animated video is on YouTube.

Wrap up

As the days get longer, the storms get stronger. Stay aware and informed to your local weather forecasts.

The Storm Prediction Center in Norman OK issues outlooks across the nation. It's worth a look in the morning hours daily before making plans for the day, and during the afternoon as the storms come to life with daytime heating.

Tuesday nights. 7PM. For the next 4 weeks or so. Webinars from the Boston Forecast Office. Check out the schedule. Take the chance to learn from those that provide your daily weather forecasts. (No, Joe didn't ask me to put this in here.)

June 1 starts a new Hurricane Season.

So much for the spring rains, and difficulty getting three dry days in a row. Keep reporting your zeros. The pendulum of precipitation will swing back. It always does.

Take advantage of this unique time of year, with increasing daylight, before the high dew points arrive in the next few months.

Thank you for all that you do for CoCoRaHS, whether in the past, present and in the days to come.